

10/594447

IAP01 Rec'd PCT/PTO 26 SEP 2006

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q96923

Jun-ichi TAMURA, et al

Appln. No.: National Stage of PCT/JP2005/006439

Confirmation No.: Unknown

Group Art Unit: Unknown

Filed: September 26, 2006

Examiner: Unknown

For: PREPARATION PROCESS OF OLIGOGLYCOSAMINOGLYCAN, AND REDUCING
END GLUCURONIC ACID TYPE OLIGOCHONDROITIN SULFATE AND
PHARMACEUTICAL COMPOSITION COMPRISING THE SAME

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.97 and 1.98

MAIL STOP AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith, except for the following: U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications filed after June 30, 2003.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action

INFORMATION DISCLOSURE STATEMENT

Appl. No.: National Stage of PCT/JP2005/006439

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on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant encloses herewith a copy of a Communication from a foreign patent office in a counterpart application citing such documents (International Search Report for PCT/JP2005/006439 dated June 27, 2005), together with an English-language version (if not already included) of at least that portion of the Communication indicating the degree of relevance found by the foreign patent office.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant submits the following explanations: English language abstracts, submitted herewith, constitute concise statements of relevance for Japanese Patent Application Publication Nos. 2003-512807, 5-178876, and 5-58716, also for FR 2 521 566 and WO 96/16973.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

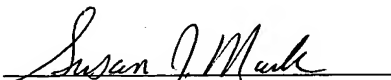
Respectfully submitted,

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CUSTOMER NUMBER


Susan J. Mack
Registration No. 30,951

Date: September 26, 2006

Substitute for Form 1449 A & B/PTO <div style="text-align: center;"><u>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</u></div> <div style="text-align: center;"><i>(use as many sheets as necessary)</i></div>				Complete if Known	
		Application Number	National Stage of PCT/JP2005/006439		
		Confirmation Number	Unknown		
		Filing Date	September 26, 2006		
		First Named Inventor	Jun-ichi TAMURA		
		Art Unit	Unknown		
		Examiner Name			
Sheet	1	of	2		
		Attorney Docket Number	Q96923		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code ² (if known)		
		US 4,943,630	A	07/24/1990	JEAN-CLAUDE JACQUINET, ET AL
		US 6,486,137	B1	11/26/2002	MONS LUNDQVIST, ET AL
		US			
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
		FR	2 521 566	A	08/19/1983	CHOAY SA	Patent Abstract of EP 0 084 999
		JP	2003-512807	A	04/02/2003	DERMATAN PRODUCTS LIMITED (US)	Patent Abstract of WO 98/34959
		WO	96/16973	A1	06/06/1996	SEIKAGAKU KOGYO CO. LTD (JP), MARUYAMA HIROSHI (JP), MORIKAWA KIYOSHI (JP), TAWADA AKIRA (JP), MIYAUCHI SATOSHI (JP), YOSHIDA KEIICHI (JP), and ASARI AKIRA (JP)	Abstract
		JP	5-178876	A	07/20/1993	MOCHIDA PHARM. CO. LTD.	Abstract
		JP	5-58716	B2	08/27/1993	TAIYO FISHERY CO. LTD.	Abstract

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation ⁶
		FRÉDÉRIC BELOT, ET AL, "SYNTHESES OF CHONDROITIN 4- AND 6-SULFATE PENTASACCHARIDE DERIVATIVES HAVING A METHYL β-D-GLUCOPYRANOSIDURONIC ACID AT THE REDUCING END", CARBOHYDRATE RESEARCH, VOL. 326, NO. 2, June 2000, PAGES 88-97, XP004200118, ISSN: 0008-6215	

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to indicate here if English language Translation is attached.

Substitute for Form 1449 A & B/PTO <u>INFORMATION DISCLOSURE</u> <u>STATEMENT BY APPLICANT</u> <i>(use as many sheets as necessary)</i>				<i>Complete if Known</i>	
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				Art Unit	Unknown
				Examiner Name	
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U.S. PATENT DOCUMENTS					
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		Number	Kind Code ² (if known)		
		US			
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.	Translation ⁶
		CRAIG A. HENKE, ET AL, "CD44-RELATED CHONDROITIN SULFATE PROTEOGLYCAN, A CELL SURFACE RECEPTOR IMPLICATED WITH TUMOR CELL INVASION, MEDIATES ENDOTHELIAL CELL MIGRATION ON FIBRINOGEN AND INVASION INTO A FIBRIN MATRIX", JOURNAL OF CLINICAL INVESTIGATION, VOL. 97, NO. 11, June 1996, PAGES 2541-2552, XP001002665, ISSN: 0021-9738	
		KATALIN MIKECZ, ET AL, "MODULATION OF HYALURONAN RECEPTOR (CD44) FUNCTION IN VIVO IN A MURINE MODEL OF RHEUMATOID ARTHRITIS" ARTHRITIS & RHEUMATISM, VOL. 42, No. 4, April 1999, PAGES 659-668	
		HIROTO KAWASHIMA, ET AL, "OVERSULFATED CHONDROITIN/DERMATAN SULFATES CONTAINING GlcAβ1/IdoAα1-3GalNAc(4,6-O-DISULFATE) INTERACT WITH L- AND P- SELECTION AND CHEMOKINES", THE JOURNAL OF BIOLOGICAL CHEMISTRY, VOL. 277, NO. 15, April 12, 2002, PAGES 12921-12930	
		KAZUKI N. SUGAHARA, ET AL, "HYALURONAN OLIGOSACCHARIDES INDUCE CD44 CLEAVAGE AND PROMOTE CELL MIGRATION IN CD44-EXPRESSING TUMOR CELLS", THE JOURNAL OF BIOLOGICAL CHEMISTRY, VOL. 278, NO. 34, AUGUST 22, 2003, PAGES 32259-32265	
		JUN-ICHI TAMURA, ET AL, "SYNTHETIC APPROACH TOWARDS SULFATED CHONDROITIN DI-, TRI- AND TETRASACCHARIDES CORRESPONDING TO THE REPEATING UNIT", CARBOHYDRATE RESEARCH, VOL. 305, 1998, PAGES 43-63	
		JUN-ICHI TAMURA, ET AL, "A REGIO- AND STEREOSELECTIVE SYNTHESIS OF 4-O-SULFATED CHONDROITIN DI- AND TETRASACCHARIDES BASED ON THE STRATEGY DESIGNED FOR THE ELONGATION OF THE REPEATING UNIT", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, VOL. 5, NO. 13, 1995, PAGES 1351-1354	

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